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MISSISSIPPI BUSINESS REVIEW

April, 1984

DIVISION OF BUSINESS RESEARCH
MISSISSIPPI STATE UNIVERSITY

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DEDICATION ISSUE

We wish to announce that Dr. Guy T. Peden, Jr. has resigned his position as Director of the Division of Business Research and Editor of the MISSISSIPPI BUSINESS REVIEW. This issue is dedicated to him in partial recognition of his long and faithful service over the past twenty years. Dr. Peden will continue serving the university as a Professor of Marketing in the Marketing Department. We are also pleased to announce the appointment of Dr. J. William Rush as Acting Director.

TABLE OF CONTENTS

Crucial Requirements for Effective Application of Just-In-Time System	3
New and Expanded Industry	9
General Fund Collections	10
Sales Indicated By Sales Tax Collections February, 1984	12
Food Stamp Participation, January, 1984	13
Agricultural Report, February, 1984	14
Financial Transactions, Regional and United States from Banks and S & L's, February, 1984	15
Southeast Regional Economic Indicators	16
State Economic Indicators	17
Business Activity by City	18
SMSA	19
Annual Wages of Workers Covered by Mississippi Employment Security Law, 1981 and 1982	20

VOLUME XLV APRIL, 1984 NUMBER 10

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The majority of our readership is businessmen and this is the essential parameter used in evaluating articles for publication. Specifically, the article can be related to any subject in Business and Economics. It may be a presentation of results of a study by the author, a well supported opinion on a current topic or an application of some theoretical aspect of business or economics that might be applicable to the businessman. The article should be well supported, and should avoid an overly technical presentation.

The article should run 14 to 16 double spaced, typewritten pages with a 72 space line. Maximum length for one part articles should be approximately 6000 words or 24 double spaced typewritten pages with a 72 space line. Longer articles will have to be condensed or considered as a multi-part series.

Photographic illustrations should be glossy prints of sufficient size, contrast and quality for reproduction. Graphs, tables and drawings may be submitted in rough form. However, should the article be accepted the author should furnish us with finished, camera-ready illustrations.

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ABER MEMBER

Crucial Requirements for Effective Application of Just-In-Time System

By

G.H. Manoochehri

The success of Japanese industries has stunned Western managers. The Japanese have shown superb performance, particularly in production of standard products such as automobiles. Their high quality products, produced very efficiently, have conquered the world. To find the Japanese secret of success, American managers have studied the different aspects of Japanese production systems. One aspect which went unnoticed until recently is the just-in-time (JIT) production system.

The JIT is a major factor contributing to Japanese high productivity and quality, and its basic concept is to produce the right item at the right time at the right quantity. In other words, to produce the item at the needed quantity just in time to be used or sold. To produce just in time, the Japanese have developed techniques and practices which are very different from our traditional production system. They have smoothed production schedules, shortened setup time, decreased work-in-process inventory, increased quality level, developed very highly cooperative relationship with workers and suppliers, etc. These concepts are discussed elsewhere. [9, 12, 18, 20]

Is JIT applicable in this country? Schonberger, an expert in Japanese production management, believes that there is nothing uniquely Japanese about the JIT system. [14] Koten, however, warns that the JIT system, like raw fish, may be difficult for Americans to swallow. [8] Although JIT could be applied in this country, it is not a "quick fix" for our manufacturing problems. Like other Japanese management techniques, JIT is gaining popularity in this country; and the application of JIT in several companies has been reported. [6, 22] Of all the reported JIT application, only one company, Kawasaki, U.S.A., Inc., has fully applied the system. Some unique characteristics of Kawasaki which helped the application are: (1) it is a Japanese company; (2) it gets more than 50% of its parts from Japanese factories; (3) and it is a nonunion company. [11] Other companies such as GM, Ford, Westinghouse, General Electric, and Bendix are experimenting with limited application of one element, mostly kanban, of the JIT system. Particularly, auto manufacturers are applying the kanban only to their raw materials inventories, just-in-time deliveries, and not to their work-in-process inventories. Some skeptical suppliers see this as a threat and argue that automakers are just pushing inventories upstream and making suppliers bear the cost of stocking inventories. [2] Although some benefits are observed from these limited applications, the full potential benefits of JIT system would only be achieved with a balanced, well-integrated production process that could employ all elements of JIT. The development of an effective JIT system is an expensive and long process, which requires some major modifications in our manufacturing systems and production practices. Several of these requirements are discussed below.

SMOOTHED AND STABLE PRODUCTION SCHEDULES

To produce just-in-time means a dramatic decrease or ideally the elimination of cycle stock and buffer stock. That is, the work station has to produce the right

quantity when it is needed. The information on how much to produce and when to produce is given to the work station through the card system, kanban, based on its following work station requirements, which are initiated based on the final assembly production schedule. Using this approach, how can we assure that the work station has the capacity to produce requirements on time? The answer is through smoothing the production schedule.

Any fluctuation in the production schedule at the final assembly would create variations in production requirements in preceding work stations. This variation becomes larger for the work stations further away from the final assembly. Large production requirement variations make undesirable work-in-process inventory or ample production capacity necessary to meet the peak in production. To prevent the variance in the production requirements, the production at the final assembly has to be smoothed. Each type of finished product has to be produced at its minimum lot size, ideally, a lot size of one.

This requirement is not a problem for a company producing a few standard products with relatively stable demand, however, it could be more of a problem for a company manufacturing a variety of products with dramatic demand fluctuations.

In addition to being smoothed, the schedule has to be relatively stable to allow for planning capacity of work stations and work assignments. Dramatic changes disrupt the system. For example, Toyota Motor Company plans for about 30 days of **firm** schedule, with the final assembly schedule set about three days in advance. However, the mix of the material called for by the final assembly schedule may vary at most by about 10% from the original plan. [11] Toyota may change its schedule from month to month, but it is consistent within the month. In contrast to the Japanese, the U.S. automakers do not forecast production needs with much accuracy beyond ten days [2]. There is a trade-off between the stable production schedule and responsiveness to the market. For example, Stone from General Motors comments that it is a mistake to simply build the cars that fit our inventory system. [2] However, a company using JIT may be unresponsive to unexpectedly large variation in demand for the duration of one firm schedule period; but because JIT markedly shortens the lead time, the overall response to the market increases.

MANUFACTURING FLEXIBILITY

In the absence of large buffer-stock, how can a company respond to manufacturing uncertainties? Manufacturing flexibility and quality are two key concepts in meeting these uncertainties. Quality is discussed in the next section. In the JIT system, manufacturing flexibility is crucial. This flexibility is achieved through the use of manufacturing cells, multi-function workers, overtime production, and shortening setup time.

The concept of manufacturing cell is to group several machines with different functions according to the required steps of the production of a component, in one work station. With this approach, the functions that had to be performed in a few separate work stations could be done in one work station. This approach increases flexibility. At times of low production requirements, one worker can run the cell by moving from one machine to another; and at times of high requirements, several workers could be assigned to each cell to increase output.

A concept coupled with manufacturing cell is multi-function workers. In JIT systems workers are trained to handle different types of processes and machines, at least machines in one cell. This cross-training gives more flexibility to the supervisors in assigning workers to different jobs according to production requirements. In addition to more flexibility, this approach results in a decrease in work-in-process, less need for materials handling, and increase in workers' morale because of team work and larger job scope, and a decrease in lead time. In the United States, union contracts limit the use of multi-function workers.

Another tool of manufacturing flexibility is overtime production. Although stable production schedules are used, if contingencies arose, workers have to work overtime to meet their daily schedule. This is another reason why an American manager may envy his Japanese counterpart.

To produce just-in-time means producing in small lots and frequent setups. This approach is economically feasible only if setup time is shortened. The Japanese have significantly shortened the setup time. Example: In 1971, it took an hour to setup an 800-ton press in Toyota Company. About five years later the setup time was reduced to 12 minutes. [17] Now, Toyota strives for "single setup" which means setup in less than 10 minutes; and "one-touch setup" that is setup in less than one minute. Western companies have recently started efforts to improve the setup time. The Bendix

plant in Stratford, Ontario, for example, has shortened the setup time for high-volume press from 4½ hours to 35 minutes. [2]

HIGH QUALITY

Two problems that can disrupt the smooth flow of work, in absence of buffer stock, are poor quality and equipment breakdown. The Japanese are obsessed with quality and, compared to U.S. companies, demand much higher quality from their workers and suppliers. Example: A supplier of plastic to TV plants such as Sharp, RCA, and Zenith states that Sharp demands much higher quality "There just is not any comparison between the quality Sharp demands and that demanded by RCA and Zenith." [3] In the JIT system as each work station has to produce the exact quantity, in small lots, just in time for the next work station use, the quality counts. Even one defective unit could cause a problem. There is no buffer stock to replace the defective unit. Thus, the JIT system provides a quick feedback for quality problems. In contrast to the U.S. where quantity and the pace of the line has the high priority, in Japan it is quality that has the high priority. The line-stop principle, **jidoka**, allows a worker to stop the line when a quality or equipment problem is observed. [18, p. 60]

The focus of quality control effort is on process control, not to produce bad units versus the screening process that is aimed at "weeding out" defective units. Therefore, the proper functioning of equipment is significant. Japanese have significantly decreased the chance of equipment breakdown by frequent preventive maintenance and running equipment at less than full capacity. To allow for maintenance after each shift, many Japanese plants use the 8-4-8-4 model, that is, running two 8-hour shifts separated by 4 hours.

COOPERATIVE WORKERS

The JIT system takes advantage of well-publicized Japanese assets: workers' morale, involvement, commitment, and superb performance. The JIT system is designed to enhance and rely on workers' contribution. As cycle and buffer stocks are low, to be responsive the system has to rely on workers' high performance, zero-defect quality, variable production hours and multifunction skills. Workers, with high motivation, play the role of problem indentifiers and problem solvers through quality circles. In contrast, the American mass production system is designed to minimize the contribution of workers by breaking the job into very simple, short cycle tasks. This design makes it easy to train, substitute, and control a worker; but at the same time it has eliminated the highly valued workers' involvement and contribution. The role of the work is defined very narrowly and only a limited amount of workers' talents and capabilities are employed. This approach has led to very highly adversarial relationships between workers and management. While in the U.S. the nationwide labor unions are very strong, in Japan workers join company unions which shows their loyalty to the company. Workers consider the workers of a rival company more of an enemy. For example, for a Toyota worker to cooperate with a Nissan worker against Toyota managers is not acceptable.

Japan does not have much natural resources; and the Japanese appreciate the resources they have. The most important Japanese resource is its workforce, and management takes good care of it. The health and welfare of employees is the top priority for Japanese managers; and they see it as their distinctive competence. As Paul Hagusa, the President of Sharp Manufacturing Co. of America, indicated, "Once there was a time when the Americans had very efficient machines and equipment, and Japanese did not. At that time, regardless of the workers, those with the most modern machines had the competitive advantage. But now, one country soon has the same machinery as another. So, what makes the difference today is the quality of people." [3]

Although some U.S. companies enjoy a very cooperative relationship with their workers, these are exceptions and not the rule. To apply JIT systems, a highly cooperative relationship should be developed. This is probably the toughest obstacle for management to overcome. The production schedules, manufacturing practices and procedures, plant configuration, etc., could be changed more easily than the attitudes of the people. Some of the areas that need to be modified for creating a cooperative relationship are: the attitude of management and workers, job designs, compensation plans, etc. The recent recession created a fertile environment for workers-management cooperation. Perhaps it could be used as a starting point for some companies.

DEPENDABLE SUPPLIERS

The JIT system requires on time delivery of raw materials at the exact quantity needed. The supplier, just like a work station in plant, has to deliver frequently in

small lots. In Japan it is not unusual for a supplier to make a few deliveries per day. The relationship between the manufacturer and suppliers is so well planned and coordinated that in many cases the deliveries are made directly to the line rather than to the warehouse. To achieve such a harmony, the production schedules of the suppliers should be very highly coordinated with that of the manufacturers. In the U.S., there are some obstacles obtaining this coordination: number of suppliers, type of relationship with suppliers, and lack of sharing information with suppliers.

American manufacturers use many more suppliers compared to the Japanese. In the auto industry, typically there are 2-3 vendors for each part purchased. Example: GM has more that 3500 suppliers while Toyota has less than 250. [8] The large number of suppliers create a number of problems: (1) it is harder to manage the coordination of production schedules and relationships; (2) more suppliers means more time and money to be spent in training them; (3) when several suppliers are used for the same part, it is less feasible for each supplier to make frequent deliveries.

In an effort to gain more control over timing of deliveries and quality of the parts supplied, American automakers are decreasing the number of suppliers [5].

A second obstacle is the type of relationship between suppliers and manufacturers. In Japan a very close relationship exists between the two. A supplier is considered as part of the family. A JIT manufacturer needs high quality parts on time; therefore, it goes through a tough selection and inspection process before deciding on a supplier. And once it finds the desired supplier, it helps the supplier in any possible way to enable it to meet the manufacturer's high expectations. Mr. Talbot, a supplier of microwave wire racks to Sharp Manufacturing Co. comments on the Sharp's attitude: "They'd give us every consideration under the sun because we have done a good job." [3]

In contrast, in the U.S. there is not much of a relationship between the two. The primary concern is cost. Contracts are granted annually based on lowest cost bid. Annual contracts decrease the motivation of the suppliers to invest for improving quality or productivity. Obviously, for JIT application, the relationship has to improve. GM is developing new relationships with their suppliers. Dropping the competitive bidding process, it selects a supplier early and brings it in at the design stage of a part or component to achieve better quality and lower cost. GM also is looking for use of longer term contracts to encourage suppliers in higher investment. [5]

To get suppliers to deliver just-in-time, the manufacturer has to share information with the suppliers. The firms supplying Toyota will find out months in advance the planned production schedule of the Toyota line [13]. In the U.S., sharing information is usually found only in vertically integrated firms. Automakers have not forecasted their production schedule with much accuracy beyond ten days. Current contracts require suppliers to keep on hand as much as two weeks' inventory to cover changes in the production schedule. [2]

U.S. automakers are striving for more communication and sharing information within their suppliers. Example: the Ford truck plant in Louisville uses its computer to dispatch information to suppliers such as Dane Corp., which supplies drive shafts. Instead of delivering drive shafts weekly, Dane now delivers them daily. [6]

GEOGRAPHICAL CONCENTRATION

As suppliers have to make frequent deliveries of small lots, proximity of their location is a relevant factor. In Japan most of the suppliers are located close to the manufacturers, usually less than 60 miles away. Particularly for major companies such as automakers, the suppliers are clustered around the manufacturers. The closeness of the suppliers makes frequent, timely, and reliable deliveries possible. In contrast, in the U.S. the suppliers are scattered around the country. Some parts have to be transported over a thousand miles. Long transportation time increases the cost of inventory in transit and decreases the reliability of timely deliveries. As a result companies have to increase their dependence on buffer stock.

Some U.S. manufacturers are looking into the issue of proximity of suppliers, and have shown interest in working with close by suppliers. The U.S. is just too big and the manufacturing supply base is too spread-out to copy the Japanese practice of purchasing from suppliers within a 60 mile radius. For example, GM considers the proximity of the supplier in its selection of one, but it does not exclude any supplier beyond 60 miles. It has some suppliers under the JIT system that are located 400-600 miles away. [5]

The popularity of JIT system favors the selection of suppliers which are located close by and puts pressure on suppliers to relocate and get closer to the user plant. Labor-intensive suppliers may relocate some plants because they don't have to make an immense investment to relocate. [2] Example: The Hoover Universal is building a plant near the Nissan plant in Symrna, Ten-

nessee to deliver seats just in time for production at the Nissan plant. [2] Another example is Delco Electronics, located in Kokomo, Indiana, which has recently spent 204 million dollars in remodernization and has switched to the JIT system. It made it clear to its 800 suppliers that closer locations will be rewarded. So far five of the suppliers have moved to the area. [7]

With the good transportation system in this country and the moves that some companies are already making, this factor should not be a major obstacle in the application of JIT. Small suppliers, particularly the labor-intensive ones, have to be fast in relocating once their major user plant switches to the JIT system.

APPROPRIATE PLANT CONFIGURATION

The JIT ideal is: Make a piece, check it out, and pass it to the next worker. The next worker's station is close by and it is the only place you can put the part. The American approach is: Make a large lot on an expensive, fast machine, pile them somewhere, and periodically call for the forklift truck to move the lot to the next work station, pile them there, and use them gradually. [18, p. 122]

To strive for the above ideal, the JIT plants are product-oriented, using manufacturing cells. In these plants one cell performs many or all operations necessary to complete one component or a phase of production. While most of the plants in the U.S are functional-oriented, [12] in these plants a work center performs a single operation and sends the part, in large lots, to the next work station for the next step operation.

As a result of using the above approach, American manufacturers use a large percentage of their floor space for the storage of material, particularly work-in-process inventory. A JIT plant does not need the storage space, so machines could be moved closer. Less time and money is spent on materials handling, and the plant would be smaller. Example: Bendix Plant in London, Ontario, has converted 10,000 square feet of floor space from storage to manufacturing. [2] In a comparison of a North American plant layout to a Japanese comparable plant, the North American plant called for three times as much square feet, 900,000 square feet compared to 300,000. And the North American plant's bid called for a plant investment three times as much. [18, p. 121]

Another area of concern in switching to JIT is the ability of the plant to handle more frequent deliveries. Some may need modification in the receiving area. GM is building its new plant to handle more than 300 trucks per day. [5]

Considering the high investment cost involved, it is not economically feasible to change the plant configuration of existing plants. However, the design of the new plants will be more influenced by the JIT requirements.

STRONG MANAGEMENT COMMITMENT AND SUPPORT

Based on the above discussions, it is clear that application of the JIT system requires the company to undergo many changes, such as changes in manufacturing strategy and practices, its relationship with workers and suppliers, plant location and configuration, etc. When there are major changes involved, management commitment and support are a must. JIT system is not just an inventory system, it is a plant-wide system. JIT application affects many people in the organization. It affects their job assignment, their authority, responsibility, and relationships with others. Consequently, resistance to change is natural. Management support is needed to overcome the resistance. The JIT system development is a very long process. For example, using Toyota system as a model, it took Yamaha four years to develop its version of the JIT system. [22] And when the process of change is long, management support is more crucial.

A prerequisite to management commitment is managment education and understanding of JIT--its concepts, capabilities, limitations, and benefits. Some JIT concepts are strange to us. We are used to thinking in terms of economies of scale, economic order quantity, minimizing the operator's and machines idle time, high specialization, etc. The transition could not be done overnight.

CONCLUSION

An effective application of JIT would result in many advantages: higher productivity, improved quality, shorter lead time, increased flexibility and adaptability to changes, elimination of waste, and a significant reduction in work-in process inventory. Example: In 1981 Ford turned its inventory 7.5 times, while in 1980 Toyota had 62 inventory turns. [2]

The benefits of the JIT system are significant enough to motivate us to study the system and its applicability in this country. The author agrees with Schonberger that there is nothing uniquely Japanese about the JIT system. Looking at the requirements,

there is nothing that, culturally, is impossible to achieve, although some require a long period to overcome.

The recommendation is not the adaptation of JIT as it is used in Japan. Rather there are many economic, geographical, social, and cultural differences between the two countries that do not allow the exact copying of their system. However, there are enough useful concepts and techniques in the JIT system that it is worth studying and analyzing their applicability in the U.S.

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INDEXES OF SELECTED MISSISSIPPI ECONOMIC INDICATORS
[Seasonally Adjusted]
1969 = 100

Indicator	February 1984	January 1984	February 1983
Retail Sales	168.5	168.0	159.2
Electric Sales	215.0	233.1	196.4
Gasoline Gallonage	131.0	146.4	128.5

NEW AND EXPANDED INDUSTRY

Town Firm Product	No. of Employees
NEW	
Benoit	
Desert-Seed Co.	
Cotton seed delinting	10
Belzoni	
Spindle Inc.	
Cotton gin spindles	10
Cold Water	
Martin of Miss.	
Hardwood cabinets	200
Columbus	
United Parcel Service	
Distribution center	30
Grenada	
Grenada Furniture	
Oriental strandboard	46
Olive Branch	
Bozof Dinettes, Inc.	
Dinette suites	200
Tupelo	
Briarwood Furniture	
Sleepers & sofas	50
EXPANDED	
Amory	
Amory Garment Co.	
Ladies' slacks	75
Booneville	
Park Lane, Inc.	
Living room furniture	30
Wall Snugglers	
Recliners	35
Corinth	
Kimberley-Clark Corp.	
Non-Woven fabrics	120
Grenada	
McQuay-Perfex, Inc.	
Air-Conditioning equipment	165
Pennaco Hosiery, Inc.	
Hosiery	
Grenada Farms, Inc.	
Milk	
Hernando	
Lehman Roberts Asphalt	
Asphalt	10
Leland	
Burdett Gin Co.	
Cotton gin	8
Marietta	
Hodges wood products	
Show wood	27
DeVaughn Woodwork	
Wood finishing	5
Morton	
Morton Machine Co.	
Woodworking machinery	10
Pontotoc	
Global Furniture	
Upholstered furniture	10
Pontotoc Box Co.	
Wooden vaults	6
Shuqualak	
Shuqualak Lumber Co.	
Lumber	15
Vicksburg	
Wire Corporation	
Steel wire	60
Crouse-Hinds	
Polystyrene egg cartons	40
Walls	
Imperial Mfg. Co.	
Furniture	50

GENERAL FUND
Comparing July 1, 1983-February 29, 1984

	February 1984	February 1983
Sales Tax	$36,123,660(1)	$31,910,563
Use & Wholesale Compensating Tax	6,963,877(2)	5,513,067
Individual Income Tax	7,258,573	1,589,693
Corporate Tax	5,765,589	3,437,575
Tobacco Tax	2,140,615	2,096,365
ABC Division	2,148,463	1,711,840
Beer & Wine Tax	1,627,089	1,543,819
Oil Severance Tax	3,881,716	3,292,034
Estate Tax	1,790,260	620,361
Statewide Privilege Tax	318	29,850
Installment Loan Tax	2,611	173,194
Gas Severance Tax	2,494,491	2,899,455
Insurance Premium Tax	43,860	8,925
Auto Tag Fees	8,806	312,252
Auto Privilege Tax	438,781	405,272
Title Fees	101,022	93,102
Petroleum Tax	443,773	382,043
Admission Tax	23,422	8,092
Timber Severance Tax	——	39,211
Slot Vending Tax	336,636	286,596
Pulpwood Scaling Fees	7,296	7,931
Fire Marshal Fees	——	1,080
Freeport Warehouse Tax	——	——
Aircraft Registration Fees	1,980	2,285
Int. on Direct Deposits	85,231	——
Tax Commission Transfer to Gen. Fund	$ 71 688,072	$ 56,364,606
Tax Comm. Special Fund Transfers	58,184,720	53,972,982
Tax Commission Total Transfers	$129,872,792	$110,337,588

(1) 2% Discount allowed and not included-$544,092

(2) 2% Discount allowed and not included-$ 52,004

Tax Commission Cash Balance February 29, 1984-$32,749,551

Tax Commission Cash Balance February 28, 1983-$11,038,511

COLLECTIONS
With July 1, 1982-February 28, 1983

7/1/83 to 2/29/84	7/1/82 to 2/28/83	Increase or Decrease over Prior Year	
		Amount	Percent
$335,083,777 (1)	$321,179,758	$13,904,019	4.33
66,742,694 (2)	54,167,701	12,574,993	23.21
161,834,642	139,092,977	22,741,665	16.35
55,516,732	53,108,136	2,408,596	4.54
19,114,122	19,828,382	(714,260)	(3.60)
19,966,306	19,274,066	692,240	3.59
14,403,843	13,999,118	404,725	2.89
31,475,453	34,064,127	(2,588,674)	(7.60)
6,185,264	6,023,365	(161,899)	2.69
388,238	648,432	(260,194)	(40.13)
1,613,273	1,378,708	234,565	17.01
19,354,565	23,456,936	(4,102,371)	(17.49)
23,601,486*	31,604,154*	(8,002,668)	(25.32)
3,295,486	3,076,072	219,414	7.13
2,861,810	2,492,570	369,240	14.81
846,241	782,761	63,480	8.11
3,512,968	3,349,680	163,288	4.87
266,343	207,629	59,205	28.51
43,569	329,482	(285,913)	(86.78)
611,136	582,432	28,704	4.93
76,259	50,113	26,146	52.17
112,326	129,836	(17,510)	(13.49)
130	120	10	8.33
2,745	2,285	460	20.13
476,378	-0-	476,378	----
$767,386,283	$728,828,840	$38,557,443	5.29
362,061,706	312,346,533	49,715,173	15.92
$1,129,447,989	$1,041,175,373	88,272,616	8.48

(1) 2% Discount allowed and not included-$4,505,734

(2) 2% Discount allowed and not included-$664,569

*Collections reflect three quarters in FY 1983 and two Quarters in FY 1984.

Sales Indicated By Sales Tax Collections During February, 1984 By County (000's)

Source: State Tax Commission

County	Total Sales Tax Collections	Indicated Sales
Adams	1,516	28,781
Alcorn	839	16,058
Amite	155	3,826
Attala	393	7,661
Benton	63	1,166
Bolivar	840	16,439
Calhoun	252	5,328
Carroll	93	2,080
Chickasaw	327	6,497
Choctaw	103	1,898
Claiborne	184	3,962
Clarke	230	4,649
Clay	383	7,691
Coahoma	946	18,605
Copiah	438	9,218
Covington	449	8,105
DeSoto	923	17,860
Forrest	2,460	51,809
Franklin	116	2,589
George	228	4,407
Greene	97	1,829
Grenada	628	14,727
Hancock	530	10,646
Harrison	4,635	92,724
Hinds	10,403	200,120
Holmes	322	6,511
Humphreys	200	4,850
Issaquena	11	238
Itawamba	269	5,393
Jackson	2,702	53,764
Jasper	271	5,178
Jefferson	65	1,351
Jeff Davis	206	4,183
Jones	2,123	41,579
Kemper	100	1,838
Lafayette	641	11,626
Lamar	427	9,438
Lauderdale	2,765	66,605
Lawrence	172	3,964
Leake	305	6,182
Lee	2,472	54,357
Leflore	1,068	20,385
Lincoln	807	15,596
Lowndes	1,842	35,157
Madison	1,038	23,609
Marion	680	12,410
Marshall	365	7,103
Monroe	715	14,778
Montgomery	221	4,111
Neshoba	468	9,365
Newton	327	6,621
Noxubee	153	2,829
Oktibbeha	781	14,904
Panola	591	11,267
Pearl River	696	13,141
Perry	218	8,417
Pike	1,114	21,150
Pontotoc	316	6,387
Prentiss	409	8,547
Quitman	143	2,708
Rankin	2,001	41,071
Scott	465	8,998
Sharkey	127	2,359
Simpson	455	9,893
Smith	157	3,393
Stone	184	3,810
Sunflower	611	12,998
Tallahatchie	199	3,794
Tate	330	6,099
Tippah	318	6,476
Tishomingo	505	14,197
Tunica	133	2,491
Union	381	7,361
Walthall	193	3,766
Warren	1,408	28,609
Washington	1,820	34,970
Wayne	418	7,938
Webster	152	2,974
Wilkinson	206	4,066
Winston	307	5,950
Yalobusha	200	4,181
Yazoo	568	10,914
State Total	67,360	1,381,039

Food Stamp Participation By County, January, 1984

SOURCE: State Welfare Department

County	Number of Households[2] (Average Allotment $133.71)	Number of Persons[3] (Average Allotment $42.33)	Coupon Value[4] (Average Per Meal $.47)
Adams	2,882	8,281	$ 368,490
Alcorn	2,131	5,417	225,008
Amite	882	3,128	117,132
Attala	1,665	5,011	195,417
Benton	753	2,630	100,633
Bolivar	4,170	15,840	668,575
Calhoun	1,006	2,777	104,153
Carroll	814	2,465	94,316
Chickasaw	1,022	3,837	99,722
Choctaw	720	2,046	80,400
Claiborne	1,203	3,913	170,274
Clark	1,175	3,284	129,663
Clay	1,582	5,004	215,375
Coahoma	3,812	13,582	584,615
Copiah	2,001	6,425	270,684
Covington	1,241	4,074	158,274
DeSoto	2,008	6,988	283,920
Forrest	4,316	11,949	544,088
Franklin	863	2,413	99,791
George	1,219	3,785	171,978
Greene	948	2,883	126,824
Grenada	1,244	3,883	157,042
Hancock	1,860	5,325	247,635
Harrison	6,131	18,940	866,715
Hinds	13,716	41,203	1,891,551
Holmes	3,360	11,293	499,538
Humphreys	1,198	4,595	187,964
Issaquena	238	922	35,929
Itawamba	866	2,165	82,266
Jackson	5,159	16,688	838,556
Jasper	1,233	3,993	151,333
Jefferson	969	3,147	118,458
Jeff Davis	1,320	4,165	169,887
Jones	2,911	8,463	336,024
Kemper	730	2,409	91,384
Lafayette	1,147	3,375	127,424
Lamar	1,598	4,533	194,884
Lauderdale	3,975	11,787	511,354
Lawrence	891	2,604	106,115
Leake	1,846	5,394	215,657
Lee	2,155	5,716	234,104
Leflore	3,090	11,181	$ 461,099
Lincoln	2,203	6,653	284,295
Lowndes	*2,669*	*8,778*	*363,185*
Madison	3,393	12,025	523,191
Marion	1,675	5,376	232,158
Marshall	3,028	10,470	424,445
Monroe	1,968	6,073	246,666
Montgomery	1,384	3,908	154,122
Neshoba	1,566	4,537	173,683
Newton	1,219	3,459	136,972
Noxubee	1,568	5,352	218,504
Oktibbeha	1,985	6,075	266,350
Panola	2,480	9,235	373,559
Pearl River	2,057	6,054	267,814
Perry	1,104	3,106	129,181
Pike	2,486	7,282	318,549
Pontotoc	1,134	2,842	105,584
Prentiss	1,252	3,327	128,695
Quitman	1,331	5,023	207,177
Rankin	2,159	6,442	254,753
Scott	1,546	4,762	186,005
Sharkey	942	3,831	146,515
Simpson	1,223	3,571	150,735
Smith	820	2,465	88,531
Stone	723	2,338	102,969
Sunflower	2,701	11,032	454,828
Tallachatchie	1,878	7,279	288,746
Tate	1,595	4,722	186,450
Tippah	1,337	3,641	139,235
Tishomingo	1,126	2,770	115,764
Tunica	1,366	5,174	212,573
Union	1,140	3,093	115,924
Walthall	1,155	3,996	167,301
Warren	3,013	8,881	406,808
Washington	6,106	21,528	957,927
Wayne	1,855	5,680	238,208
Webster	705	1,854	73,383
Wilkinson	1,114	3,441	133,257
Winston	1,826	5,532	219,915
Yalobusha	1,021	2,908	116,147
Yazoo	2,696	8,910	369,056
State Total	164,600	519,965	$22,008,261

[1]Meals are on a state-wide basis and is computed on an average 30 day month and 3 meals per day for a total of 90 meals in one month.

[2]Average Allotment for Households is determined by dividing state total by number of state total of households.

[3]Average Allotment for Persons is determined by dividing state total by total number of persons.

[4]Average per meal is determined by dividing the average allotment per person ($42.33) by total number of average meals a month (90)

Agricultural Report, February, 1984

The February 15, 1984 Index of Prices Received by Mississippi farmers for all commodities was down 1 point, (1 percent) at 127 percent of its January-December 1977 average, according to the Mississippi Crop and Livestock Reporting Service.

Decreases in soybean prices were responsible for the 5 point (4 percent) decline in the All Crops Index leaving it at 108 percent of its January-December 1977 average.

Increases in beef cattle and calf prices were responsible for the 4 point (3 percent) rise in the Livestock Products Index leaving it at 154 percent of its January-December 1977 average.

The February ratio of prices received by Mississippi farmers to U.S. prices paid was 77 percent of its January-December 1977 average. The Index of Prices Paid by Farmers for Commodities, Services, Interest, Taxes and Farm Wage Rates for February was 165, up 1 point from mid-January.

MISSISSIPPI AND U.S. INDEX NUMBERS
1977 = 100

GROUP	February 15 1983	January 15 1984 1/	February 15 1984
MISSISSIPPI			
All Commodities	106	128	127
All Crops	87	113	108
Oil Bearing	81	116	108
Cotton	91	108	108
Livestock & Livestock Products	133	150	154
Meat Animals	166	145	163
Poultry	102	154	149
Dairy	142	149	148
Ratio of Prices Received to Paid 2/	77	78	77
United States			
Prices Received	132	144	142
Prices Paid, Interest, Taxes & Wage Rates	159	164	165
Parity Ratio 3/	83	88	86

1/ Revised. 2/ Ratio of Miss. Prices Received to U.S. Prices Paid. 3/ Ratio of Index of Prices Received by Farmers to Index of Prices Paid, Interest, Taxes and Farm Wage Rates.

SOURCE: Mississippi Crop and Livestock Reporting Service, Jackson, Mississippi, March 1, 1984.

Financial Transactions, Regional and United States, from Banks and S & L's, February, 1984

$ millions	FEB 1984	JAN 1984	FEB 1983	ANN. % CHG.		FEB 1984	JAN 1984	FEB 1983	ANN. % CHG.
UNITED STATES									
Commercial Bank Deposits	1,317,739	1,351,109	1,232,245	+ 7	Savings & Loans**				
Demand	292,879	339,855	291,797	+ 0	Total Deposits	634,601	630,088	570,029	+ 11
NOW	85,117	88,719	69,797	+ 22	NOW	17,828	18,904	15,351	+ 16
Savings	351,519	350,184	277,655	+ 27	Savings	172,948	175,541	156,897	+ 10
Time	618,735	619,801	622,246	− 1	Time	446,871	439,989	400,379	+ 12
Credit Union Deposits	60,467	60,745	52,089	+ 16		FEB	JAN	FEB	
Share Drafts	5,266	5,546	4,312	+ 22	Mortgages Outstanding	483,596	479,026	473,656	+ 2
Savings & Time	49,983	50,491	42,746	+ 17	Mortgage Commitments	32,331	34,332	17,964	+ 80
SOUTHEAST									
Commercial Bank Deposits	150,517	152,054	136,837	+ 10	Savings & Loans				
Demand	34,525	38,739	34,088	+ 1	Total Deposits	N.A.	N.A.	N.A.	
NOW	11,117	11,360	9,355	+ 19	NOW	N.A.	N.A.	N.A.	
Savings	39,610	39,297	30,115	+ 32	Savings	N.A.	N.A.	N.A.	
Time	68,313	67,269	66,009	+ 3	Time	N.A.	N.A.	N.A.	
Credit Union Deposits	6,029	6,025	4,979	+ 21		FEB	JAN	FEB	
Share Drafts	465	502	363	+ 28	Mortgages Outstanding	68,866	68,791	67,016	+ 3
Savings & Time	5,203	5,168	4,248	+ 22	Mortgage Commitments	4,578	4,926	3,067	+ 49
ALABAMA									
Commercial Bank Deposits	15,679	15,930	14,571	+ 8	Savings & Loans**				
Demand	3,552	4,106	3,527	+ 1	Total Deposits	5,273	5,222	4,564	+ 16
NOW	1,007	1,040	836	+ 20	NOW	144	151	178	− 19
Savings	3,241	3,210	2,583	+ 25	Savings	893	865	649	+ 38
Time	8,282	8,186	8,032	+ 3	Time	4,274	4,242	3,784	+ 13
Credit Union Deposits	917	915	852	+ 8		FEB	JAN	FEB	
Share Drafts	83	89	69	+ 20	Mortgages Outstanding	3,846	3,791	3,685	+ 4
Savings & Time	794	791	723	+ 10	Mortgage Commitments	288	289	247	+ 17
FLORIDA									
Commercial Bank Deposits	53,176	53,616	46,681	+ 14	Savings & Loans**				
Demand	12,386	13,550	12,127	+ 2	Total Deposits	54,424	53,387	50,188	+ 8
NOW	4,632	4,707	4,012	+ 15	NOW	2,056	2,119	1,787	+ 15
Savings	18,583	18,364	13,438	+ 38	Savings	14,918	14,591	13,503	+ 10
Time	18,564	18,417	17,924	+ 4	Time	37,855	37,152	35,181	+ 8
Credit Union Deposits	2,650	2,638	2,247	+ 18		FEB	JAN	FEB	
Share Drafts	233	253	193	+ 21	Mortgages Outstanding	41,223	40,809	39,268	+ 5
Savings & Time	2,139	2,114	1,787	+ 20	Mortgage Commitments	3,181	3,458	2,346	+ 36
GEORGIA									
Commercial Bank Deposits	22,033	22,748	19,532	+ 13	Savings & Loans				
Demand	6,602	7,458	6,184	+ 7	Total Deposits	N.A.	N.A.	N.A.	
NOW	1,465	1,509	1,251	+ 17	NOW	N.A.	N.A.	N.A.	
Savings	4,949	4,885	4,097	+ 21	Savings	N.A.	N.A.	N.A.	
Time	9,998	9,692	8,840	+ 13	Time	N.A.	N.A.	N.A.	
Credit Union Deposits	1,340	1,359	934	+ 43		FEB	JAN	FEB	
Share Drafts	67	75	39	+ 72	Mortgages Outstanding	8,326	8,259	8,641	− 4
Savings & Time	1,205	1,208	836	+ 44	Mortgage Commitments	477	503	182	+ 162
LOUISIANA									
Commercial Bank Deposits	25,477	25,717	24,114	+ 6	Savings & Loans**				
Demand	5,618	6,376	5,874	− 4	Total Deposits	9,139	8,997	8,430	+ 8
NOW	1,459	1,474	1,240	+ 18	NOW	198	202	172	+ 15
Savings	5,478	5,449	4,094	+ 34	Savings	2,368	2,400	1,841	+ 29
Time	13,306	13,105	13,322	− 0	Time	6,653	6,494	6,470	+ 3
Credit Union Deposits	202	202	162	+ 25		FEB	JAN	FEB	
Share Drafts	22	22	12	+ 83	Mortgages Outstanding	8,046	8,109	7,394	+ 9
Savings & Time	196	195	153	+ 28	Mortgage Commitments	446	531	210	+ 112
MISSISSIPPI									
Commercial Bank Deposits	11,754	11,784	11,034	+ 7	Savings & Loans**				
Demand	2,287	2,541	2,346	− 3	Total Deposits	2,507	2,545	2,508	− 0
NOW	819	827	715	+ 15	NOW	93	98	86	+ 8
Savings	2,457	2,442	1,734	+ 42	Savings	483	498	417	− 16
Time	6,453	6,320	6,473	− 0	Time	1,967	1,974	2,028	− 3
Credit Union Deposits	*	*	*			FEB	JAN	FEB	
Share Drafts	*	*	*		Mortgages Outstanding	2,035	2,048	2,033	+ 0
Savings & Time	*	*	*		Mortgage Commitments	63	62	21	+ 200
TENNESSEE									
Commercial Bank Deposits	22,398	22,759	20,905	+ 7	Savings & Loans**				
Demand	4,080	4,708	4,030	+ 1	Total Deposits	6,806	6,765	6,748	+ 1
NOW	1,735	1,803	1,301	+ 33	NOW	169	180	161	+ 5
Savings	4,929	4,947	4,169	+ 18	Savings	1,335	1,354	1,282	+ 4
Time	11,710	11,549	11,418	+ 3	Time	5,343	5,282	5,332	
Credit Union Deposits	920	911	784	+ 17		FEB	JAN	FEB	
Share Drafts	60	63	50	+ 20	Mortgages Outstanding	5,390	5,775	5,995	− 10
Savings & Time	869	860	749	+ 16	Mortgage Commitments	185	205	153	+ 21

Notes: All deposit data are extracted from the Federal Reserve Report of Transaction Account, other Deposits and Vault Cash (FR2900), and are reported for the average of the week ending the 1st Wednesday of the month. This data, reported by institutions with over $15 million in deposits as of December 31, 1979, represents 95% of deposits in the six state area. The major differences between this report and the "call report" are size, the treatment of interbank deposits, and the treatment of float. The data generated from the Report of Transaction Accounts is for banks over $15 million in deposits as of December 31, 1979. The total deposit data generated from the Report of Transaction Accounts eliminates interbank deposits by reporting the net deposits "due to" and "due from" other depository institutions. The Report of Transaction Accounts subtracts cash in process of collection from demand deposits, while the call report does not. Savings and loan mortgage data are from the Federal Home Loan Bank Board Selected Balance Sheet Data. The Southeast data represent the total of the six states. Subcategories were chosen on a selective basis and do not add to total.

* = fewer than four institutions reporting.

** = S&L deposits subject to revisions due to reporting changes.

N.A. = not available at this time.

SOURCE: Federal Reserve Bank of Atlanta, Southeastern Economic Insight, April 1, 1984.

BEST AVAILABLE COPY

Southeast Regional Economic Indicators

	NONFARM EMPLOYMENT (thousands)			UNEMPLOYMENT RATE (percent)			PLANE PASSENGER ARRIVALS (thousands)		
	Dec. 1983	Nov. 1983	Annual % Change	Dec. 1983	Nov. 1983	Annual % Change	Dec. 1983	Nov. 1983	Annual % Change
ALABAMA	1,326.3	1,324.5	+ 1	12.3	12.6	15.5	109.2	109.2	+ 12
Birmingham	336.3	335.3	+ 1	11.7	12.1	15.6	52.5	52.9	+ 10
Huntsville	133.0	133.0	+ 5	9.4	9.8	12.2	20.8	21.2	+ 12
Mobile	146.9	147.3	0	13.5	13.9	15.4	21.2	21.8	+ 10
Montgomery	105.5	105.4	+ 1	10.3	11.2	12.0	14.7	13.3	+ 24
FLORIDA	4,014.7	3,968.6	+ 5	7.5	8.1	9.5	2,258.6	1,972.0	0
Daytona Beach	87.2	86.5	+ 6	6.4	7.1	8.5	15.7	15.7	- 16
Ft. Lauderdale	372.9	371.0	+ 3	6.2	6.6	7.8	299.9	236.5	+ 4
Jacksonville	319.5	318.7	+ 3	7.7	8.1	8.2	91.3	91.5	+ 7
Melbourne	116.2	115.6	+ 5	7.1	7.6	8.3	24.2	21.0	+ 9
Miami	748.0	742.3	+ 2	8.6	9.3	11.0	882.2	749.6	- 3
Orlando	346.8	343.5	+ 5	6.3	6.8	7.8	319.4	308.5	+ 1
Sarasota	81.1	80.8	+ 7	4.8	5.1	8.7	59.4	51.7	- 25
Tallahassee	76.8	76.8	+ 0	4.5	4.7	5.3	25.6	28.6	+ 19
Tampa-St. Pete	618.3	611.6	+ 4	6.4	6.9	8.9	348.8	323.8	+ 4
West Palm Beach	237.5	234.4	+ 5	6.9	7.8	8.6	192.1	145.1	+ 7
GEORGIA	2,295.6	2,287.5	+ 3	6.6	7.0	7.8	1,647.4	1,610.9	+ 5
Atlanta	1,057.9	1,053.5	+ 4	5.6	5.9	6.5	1,599.1	1,562.5	+ 5
Augusta	125.3	124.8	+ 1	8.0	8.9	9.3	12.6	7.8	+ 28
Columbus	81.2	81.1	+ 3	8.0	8.4	9.7	6.3	7.8	+ 24
Macon	101.1	101.0	+ 2	7.2	7.6	7.4	4.0	4.2	12
Savannah	90.4	89.9	+ 2	7.6	8.2	8.6	25.4	28.7	+ 13
LOUISIANA	1,594.8	1,597.1	- 1	10.1	10.9	11.6	258.8	272.7	+ 5
Baton Rouge	213.3	212.1	+ 2	8.1	9.0	9.6	25.3	24.5	+ 16
New Orleans	508.5	507.7	- 1	8.9	9.8	10.0	233.5	248.2	+ 3
MISSISSIPPI	800.8	798.9	+ 1	10.0	10.6	11.8	31.4	31.4	+ 9
Biloxi-Gulfport	61.6	61.5	+ 0	10.7	11.8	10.8	4.1	4.8	- 25
Jackson	148.8	148.1	+ 2	6.2	6.8	7.4	27.3	26.6	+ 17
TENNESSEE	1,713.5	1,720.0	+ 3	10.3	9.8	12.7	142.1	148.6	+ 13
Chattanooga	165.3	167.0	+ 0	8.9	9.1	9.5	17.2	17.7	+ 24
Knoxville	204.7	205.1	+ 1	9.4	9.0	10.2	33.2	34.9	+ 18
Nashville	370.9	370.2	+ 1	7.4	6.9	9.2	91.7	96.0	+ 6

	NONRESIDENTIAL BUILDING PERMITS (Millions $, 12-mo. Rate)			RESIDENTIAL SINGLE-FAMILY BUILDING PERMITS (No. of units, 12-mo. Rate)			RESIDENTIAL MULTI-FAMILY BUILDING PERMITS (No. of units, 12-mo. Rate)		
	Dec. 1983	Nov. 1983	Annual % Change	Dec. 1983	Nov. 1983	Dec. 1982	Dec. 1983	Nov. 1983	Annual % Change
ALABAMA	526.0	534.9	+ 32	7,975	7,967	+ 63	8,034	7,821	+ 87
Birmingham	237.9	251.9	+ 59	2,037	2,001	+ 66	1,808	1,805	+ 155
Huntsville	72.1	69.1	+ 80	1,487	1,507	+ 60	2,913	2,921	+ 262
Mobile	63.4	63.6	+ 45	894	900	+ 52	989	755	- 4
Montgomery	39.9	38.5	+ 22	-	-	-	-	-	-
FLORIDA	4,032.3	3,987.6	+ 24	98,378	97,187	+ 73	88,805	86,554	+ 73
Daytona Beach	81.3	83.9	+ 19	3,964	3,880	+ 91	1,181	1,013	+ 19
Ft. Lauderdale	373.9	370.7	+ 13	4,161	4,012	+ 110	9,454	9,450	+ 76
Jacksonville	317.1	305.9	+ 43	5,560	5,567	+ 72	6,095	5,266	+ 142
Melbourne	130.7	134.2	+ 61	4,258	4,098	+ 88	2,758	2,617	+ 114
Miami	601.2	608.1	+ 27	5,306	5,212	+ 133	8,013	8,197	+ 28
Orlando	537.9	503.8	+ 25	12,152	11,912	+ 81	8,818	8,621	+ 130
Sarasota	84.1	80.0	+ 8	2,574	2,639	+ 60	1,832	1,950	+ 13
Tallahassee	34.6	28.5	+ 6	2,026	2,043	+ 65	1,018	1,037	- 6
Tampa-St. Pete	638.9	645.6	+ 28	16,222	15,887	+ 78	13,140	12,648	+ 74
West Palm Beach	336.6	332.8	+ 5	9,514	9,301	+ 103	9,610	9,666	+ 150
GEORGIA	1,341.1	1,295.7	+ 37	41,524	41,505	+ 58	25,435	25,409	+ 96
Atlanta	953.9	895.1	+ 38	28,665	28,536	+ 65	14,813	14,161	+ 131
Augusta	48.0	46.6	+ 14	2,338	2,358	+ 84	1,242	1,215	+ 78
Columbus	42.3	39.2	+ 9	585	575	+ 117	915	904	+ 217
Macon	36.4	33.4	+ 20	-	-	-	-	-	-
Savannah	57.0	57.3	+ 41	-	-	-	-	-	-
LOUISIANA	1,185.6	1,207.4	+ 21	16,794	16,781	+ 51	17,080	16,645	+ 102
Baton Rouge	242.3	258.6	+ 60	3,806	3,816	+ 88	3,414	3,374	+ 66
New Orleans	490.7	487.6	+ 45	6,347	6,299	+ 66	6,671	6,633	+ 165
MISSISSIPPI	191.6	185.2	+ 20	4,757	4,890	+ 35	4,834	4,658	+ 118
Biloxi-Gulfport	24.8	24.2	+ 4	-	-	-	-	-	-
Jackson	35.2	35.2	- 15	807	772	+ 134	813	505	+ 101
TENNESSEE	819.8	817.2	+ 24	13,693	13,698	+ 79	16,556	15,614	+ 139
Chattanooga	59.5	57.7	+ 1	1,073	1,065	+ 61	990	837	+ 84
Knoxville	116.3	118.8	+ 6	1,542	1,519	+ 50	684	668	- 46
Nashville	251.7	250.4	+ 53	4,027	4,027	+ 107	7,796	7,008	+ 270

Notes: Labor Force data from Bureau of Labor of Statistics Reports supplied by state agencies. Plane Passenger Arrivals are collected from 26 airports. Building Permit data are supplied by the U.S. Bureau of the Census. Nonresidential data excludes the cost of construction for publicly owned buildings. The annual percent change calculation is based on the most recent month over prior year.

- - August data not available.

SOURCE: Federal Land Bank of Atlanta, Southeastern Economic Insight, March 1, 1984.

BEST AVAILABLE COPY

STATE ECONOMIC INDICATORS

Indicator	February 1984[1]	January 1984[1]	February 1983[2]	Per Cent One Month Ago[3]	Change One Year Ago[3]
EMPLOYMENT, EARNINGS AND HOURS[4]					
Total Employment	910,400	909,700	900,000	—0—	1.2
Non-Ag Employment	795,400	793,000	768,700	2.4	26.7
Mining	9,100	9,100	8,600	—0—	0.5
Contract Construction	32,000	31,900	33,000	0.1	—1.0
Manufacturing	209,500	209,700	193,300	—0.2	16.2
Transportation and Public Utilities	37,800	37,900	37,600	—0.1	0.2
Wholesale and Retail Trade	163,700	163,900	157,600	—0.2	6.1
Finance, Insurance and Real Estate	34,000	34,000	32,900	0	1.1
Service	125,700	125,200	122,700	0.5	3.0
Government	183,600	181,400	182,800	2.2	0.8
Unemployment Rate (Per Cent Labor Force)	9.9	10.2	13.6	——	——
Average Weekly Earnings in Manufacturing (Dollars)	280.83	280.26	257.67	0.2	9.0
Average Hourly Earnings in Manufacturing (Dollars)	6.90	6.92	6.59	—0.3	4.7
Average Weekly Hours in Manufacturing	40.7	40.5	39.1	0.5	4.1
PRODUCTION (000's)					
Petroleum Production					
Production of Crude Petroleum (bbls.)[5]	2,713	2,606	2,774	4.1	—2.2
Gasoline Delivered to Dealers (gals.)[6]	98,661	123,725	98,661	—20.3	0.4
PUBLIC UTILITIES					
Sales of Electricity (000's KWH)[7]	1,827,075	2,051,765	1,697,280	—11.0	7.6
RETAIL SALES (000's)[8]	1,234,856	1,598,346	1,161,114	—22.7	6.4

Indicator	November 1983	October 1983	November 1982	Per Cent One Month Ago	Change One Year Ago
AGRICULTURE (000's)[9]					
Total Cash Receipts from Farm Marketings	463,966	475,480	455,633	2.4	1.8
Cash Receipts from Marketing Livestock	84,656	89,226	67,595	5.1	25.2
Cash Receipts from Marketing Crops	379,310	386,254	388,038	1.8	2.2

[1]Preliminary

[2]Revised

[3]Percent change calculated with revised figures; not comparable with previously published data.

[4]Mississippi Employment Security Commission

[5]State Oil and Gas Board for October

[6]Mississippi Motor Vehicle Comptroller

[7]Mississippi Power Company, Mississippi Power and Light Company and Tennessee Valley Authority.

[8]Mississippi Tax Commission

[9]U.S. Department of Agriculture

BUSINESS ACTIVITY BY CITY

	City Sales Tax Collections			Building Permits		
	Current Month Feb.	PerCent Month Ago	Change Year Ago	Current Month Feb.	Month Ago	Year Ago
Aberdeen	43,841	—37.3	16.6	613,260	26,000	43,550
Baldwyn	24,161	—10.0	27.7	— —	— —	— —
Batesville	65,164	—23.0	41.3	123,095	55,396	169,000
Bay Springs	19,451	—28.0	3.9	— —	— —	— —
Bay St. Louis	42,086	—34.3	20.5	141,737	310,229	293,346
Belmont	12,566	—11.0	39.1	— —	— —	— —
Belzoni	27,009	—13.4	31.7	27,500	7,000	39,300
Biloxi	282,822	—31.1	26.1	— —	— —	— —
Brandon	44,987	—35.0	22.6	371,000	— —	— —
Brookhaven	126,132	—28.6	21.1	129,995	898,000	254,300
Brooksville	3,675	—15.0	69.0	— —	— —	— —
Canton	71,425	—17.1	28.3	— —	— —	— —
Carthage	45,955	—27.1	39.1	125,000	56,000	36,500
Charleston	16,533	—26.9	6.7	— —	— —	— —
Clarksdale	157,782	—9.1	51.0	176,657	66,400	140,400
Cleveland	109,454	—14.8	36.3	— —	— —	— —
Collins	35,764	—5.8	58.1	— —	— —	— —
Columbia	100,702	—26.1	28.1	— —	— —	— —
Columbus	273,575	—25.2	35.0	421,339	388,582	1,659,321
Corinth	128,480	—23.0	26.5	158,995	— —	— —
Crystal Springs	29,199	—9.7	2.7	15,600	27,500	18,000
Drew	10,744	—15.5	19.1	— —	— —	— —
Edwards	3,998	—28.2	43.5	105,500	— —	— —
Ellisville	12,338	—52.4	—15.5	— —	— —	— —
Eupora	16,761	—37.4	12.3	— —	— —	— —
Fayette	9,236	—25.6	—0.9	— —	— —	— —
Forest	49,116	—30.1	13.9	153,500	— —	— —
Greenville	277,100	—28.7	26.6	— —	— —	— —
Greenwood	146,907	—30.3	9.7	341,900	1,881,826	102,000
Grenada	101,711	—17.9	38.3	246,000	251,000	92,000
Gulfport	310,596	—23.4	34.1	1,688,214	1,121,645	— —
Hattiesburg	406,534	—34.0	22.5	— —	— —	— —
Hernando	20,944	—45.9	6.8	3,300	— —	553,500
Hollandale	11,197	—28.8	—5.7	— —	— —	— —
Holly Springs	43,742	—28.4	30.8	65,400	— —	28,400
Houston	38,741	—21.5	39.7	79,700	140,000	102,156
Indianola	65,357	—14.0	16.7	— —	— —	— —
Iuka	27,859	—26.1	23.5	— —	— —	— —
Jackson	1,607,835	—30.0	22.7	6,503,324	6,071,185	3,541,743
Kosciusko	58,844	—31.4	29.2	55,000	41,000	47,000
Laurel	295,760	—31.1	13.5	4,219,558	663,612	238,746
Leland	20,970	—14.0	26.2	7,500	19,500	80,976
Lexington	22,691	—10.2	14.9	— —	— —	— —
Louisville	51,351	—24.8	21.9	163,620	82,702	35,705
Lucedale	33,627	—31.2	19.2	139,000	51,500	57,000
Lumberton	10,592	—27.8	40.3	— —	— —	— —
Macon	16,947	—25.3	27.2	— —	— —	— —
Magee	51,631	—25.9	38.7	— —	— —	— —
Magnolia	10,449	0.7	30.4	52,500	27,100	48,000
Marks	15,866	—17.8	25.5	— —	— —	— —
McComb	142,909	—27.3	31.6	92,600	159,925	209,500
Meadville	8,048	28.5	81.1	70,000	— —	—0—
Mendenhall	20,957	—25.9	26.0	122,300	30,400	—0—
Meridian	507,153	—12.4	69.3	650,339	462,194	577,081
Monticello	21,749	—12.0	22.2	17,000	60,000	45,000
Morton	21,183	—25.4	26.0	— —	— —	— —
Moss Point	74,378	21.8	69.8	— —	— —	— —
Natchez	234,160	—35.6	36.2	1,014,590	1,756,565	443,301
New Albany	63,724	—28.5	33.0	315,800	81,400	4,068,518
Newton	24,867	—29.2	18.3	115,000	— —	200,000
Ocean Springs	81,391	—20.3	18.3	436,814	— —	— —
Okolona	15,520	—27.1	35.0	37,900	— —	1,600
Oxford	104,433	—27.8	16.5	308,300	215,129	934,906
Pascagoula	249,840	17.4	41.6	176,306	544,301	416,805
Pass Christian	14,108	—19.8	16.2	— —	— —	— —
Philadelphia	69,901	—25.8	40.2	— —	— —	— —

BUSINESS ACTIVITY BY CITY

	City Sales Tax Collections			Building Permits		
	Current Month Feb.	PerCent Month Ago	Change Year Ago	Current Month Feb.	Month Ago	Year Ago
Picayune	90,970	—34.8	21.4	255,000	263,000	—0—
Pontotoc	42,978	—31.0	28.8	— —	— —	— —
Poplarville	19,669	1.3	37.0	— —	— —	— —
Port Gibson	17,017	—13.4	14.8	— —	— —	— —
Prentiss	23,469	—19.3	29.3	103,100	5,800	—0—
Quitman	29,988	—14.1	47.4	— —	— —	— —
Raymond	7,204	—7.3	102.9	— —	— —	— —
Richton	10,321	—32.1	25.1	1,000	— —	— —
Rosedale	8,705	—21.2	21.5	— —	— —	— —
Ruleville	10,310	—20.7	23.3	— —	— —	— —
Sardis	16,775	—28.0	23.7	3,000	— —	— —
Senatobia	47,231	—37.5	20.0	32,500	345,000	393,000
Shelby	8,528	—28.2	8.3	— —	— —	— —
Starkville	114,863	—21.7	20.2	736,200	531,000	253,800
Summit	9,856	—33.4	8.1	— —	— —	— —
Taylorsville	12,597	—15.0	20.7	— —	— —	— —
Tchula	4,458	—26.0	24.7	— —	— —	— —
Tunica	16,562	—30.6	27.2	— —	— —	— —
Tupelo	355,969	—34.5	28.6	1,972,244	— —	— —
Union	15,879	0.4	55.5	— —	— —	— —
Utica	9,018	—27.1	11.0	— —	— —	— —
Vicksburg	208,441	—33.3	25.7	7,098,552	253,760	1,400,095
Walnut Grove	1,134	—34.5	—22.3	— —	— —	— —
Water Valley	25,797	—23.5	28.6	— —	— —	— —
Waynesboro	57,070	—20.9	21.0	58,000	36,500	128,200
West Point	60,060	—23.5	24.8	40,815	97,800	28,725
Wiggins	24,380	—22.3	13.9	— —	— —	— —
Winona	30,998	—33.6	14.5	— —	— —	— —
Yazoo City	64,048	—39.4	20.4	67,000	13,000	17,000

STANDARD METROPOLITAN STATISTICAL AREAS

JACKSON [Hinds and Rankin Counties]	February 1984	January 1984	February 1983	Per Cent Month Ago	Change Year Ago
MANPOWER DATA					
Civilian Labor Force	154,900	154,600	156,500	0.2	—1.0
Unemployed Persons	10,500	10,600	14,700	—0.9	—28.6
Per Cent of Labor Force	6.8	6.9	9.4	— —	— —
Employed Persons	144,400	144,000	141,800	0.3	1.8
Non-Ag Wage & Salaries	124,600	124,300	122,200	0.2	0.2
Manufacturing	18,800	18,700	18,400	0.5	2.2
CITY SALES TAX COLLECTIONS	1,673,042	2,395,173	1,361,829	—30.1	22.9

BILOXI-GULFPORT [Hancock, Harrison and Stone Counties]	February 1984	January 1984	February 1983	Per Cent Month Ago	Change Year Ago
MANPOWER DATA					
Civilian Labor Force	67,170	67,810	70,180	—0.9	—3.5
Unemployed Persons	6,810	7,220	9,730	—5.7	30.0
Per Cent of Labor Force	10.1	10.6	13.9	— —	— —
Employed Persons	60,360	60,590	60,450	—0.4	—0.1
Non-Ag Wage & Salaries	51,170	51,350	51,220	—0.3	—0.1
Manufacturing	8,900	8,960	8,910	—0.7	—0.1
CITY SALES TAX COLLECTIONS	607,526	833,657	468,144	—27.1	29.8

Annual Wages of Workers Covered By Mississippi Employment Security Law For Years, 1981 and 1982

SOURCE: Miss. Employment Security Commission. Computations made by Division of Business Research, College of Business and Industry, Mississippi State University.

County	1981	% of State	% of Change	1982	% of State	% of Change
Adams	222,089	2.35	12.78	231,589	2.40	4.27
Alcorn	148,881	1.57	9.61	149,114	1.52	0.16
Amite	21,323	0.23	12.16	20,600	0.21	3.39
Attala	42,222	0.45	2.38	40,865	0.42	3.21
Benton	6,865	0.07	3.95	6,735	0.07	1.89
Bolivar	119,310	1.26	6.76	122,243	1.25	2.46
Calhoun	33,690	0.36	3.51	34,937	0.36	3.70
Carroll	7,839	0.08	2.39	8,113	0.08	3.50
Chickasaw	65,177	0.69	9.35	64,613	0.66	—0.87
Choctaw	16,888	0.18	—2.61	14,567	0.15	—13.74
Claiborne	135,823	1.44	22.91	119,021	1.22	—12.37
Clarke	50,588	0.54	7.07	50,912	0.52	0.64
Clay	92,041	0.97	9.21	93,842	0.96	1.96
Coahoma	104,446	1.10	4.66	106,358	1.10	1.83
Copiah	57,567	0.61	2.35	58,841	0.60	2.21
Covington	32,167	0.34	1.95	30,948	0.32	—3.79
DeSoto	133,315	1.41	9.31	139,741	1.43	4.82
Forrest	309,221	3.27	6.55	324,721	3.32	5.01
Franklin	13,501	0.14	7.86	14,512	0.15	7.49
George	21,714	0.23	2.49	22,251	0.23	2.47
Greene	8,931	0.09	—5.35	7,736	0.08	—13.38
Grenada	89,262	0.94	7.38	91,656	0.94	2.68
Hancock	73,495	0.78	12.30	92,634	0.95	26.04
Harrison	488,949	5.17	11.91	525,683	5.38	7.51
Hinds	1,603,208	16.96	8.08	1,704,025	17.43	6.29
Holmes	38,083	0.40	5.05	39,608	0.40	4.00
Humphreys	27,823	0.29	16.26	29,718	0.30	6.81
Issaquena	2,515	0.03	18.08	2,108	0.02	16.18
Itawamba	45,849	0.48	7.66	46,158	0.47	0.67
Jackson	633,942	6.70	12.22	786,449	8.04	24.10
Jasper	35,561	0.38	7.79	35,338	0.36	—0.63
Jefferson	13,506	0.14	25.43	12,774	0.13	—5.43
Jeff Davis	18,164	0.19	1.54	20,936	0.21	15.26
Jones	286,716	3.03	15.98	291,868	2.99	1.80
Kemper	12,103	0.13	5.71	11,373	0.12	—6.03
Lafayette	97,100	1.03	6.51	101,138	1.03	4.16
Lamar	42,479	0.45	23.51	49,517	0.51	16.57
Lauderdale	312,749	3.31	7.70	325,254	3.33	4.00
Lawrence	37,442	0.40	11.75	38,423	0.39	2.62
Leake	35,077	0.37	13.49	36,604	0.37	4.35
Lee	337,895	3.57	7.30	362,366	3.70	7.24
Leflore	140,837	1.49	8.02	146,977	1.50	4.36
Lincoln	86,647	0.92	4.50	94,386	0.97	8.93
Lowndes	234,627	2.48	7.68	262,752	2.69	11.99
Madison	89,936	0.95	12.57	93,452	0.96	3.91
Marion	72,755	0.77	7.87	74,279	0.76	2.10
Marshall	50,092	0.53	8.13	47,846	0.49	—4.48
Monroe	120,194	1.27	12.32	126,668	1.30	5.13
Montgomery	23,233	0.24	4.29	22,254	0.23	—4.21
Neshoba	67,688	0.72	10.59	69,726	0.71	3.01
Newton	48,392	0.51	11.25	48,568	0.50	0.36
Noxubee	20,910	0.22	6.94	20,493	0.21	—2.00
Oktibbeha	124,289	1.31	11.39	128,623	1.32	3.49
Panola	66,187	0.70	5.65	66,509	0.68	0.49
Pearl River	64,126	0.68	14.58	69,607	0.71	8.55
Perry	17,698	0.19	—0.33	24,424	0.25	36.46
Pike	105,141	1.11	8.02	109,605	1.12	4.25
Pontotoc	51,733	0.55	10.08	49,906	0.51	3.53
Prentiss	56,182	0.59	7.46	58,618	0.60	4.33
Quitman	21,419	0.23	2.56	21,041	0.21	—1.76
Rankin	243,388	2.57	14.04	259,573	2.66	6.65
Scott	74,631	0.79	11.81	77,442	0.79	3.77
Sharkey	21,831	0.23	15.09	21,566	0.22	—1.21
Simpson	54,234	0.57	3.56	55,947	0.57	3.16
Smith	35,265	0.37	6.80	37,248	0.38	5.62
Stone	30,475	0.32	5.42	27,153	0.28	—10.90
Sunflower	91,615	0.97	7.88	99,231	1.01	8.31
Tallahatchie	21,904	0.23	—2.19	21,197	0.22	—3.23
Tate	47,246	0.50	6.80	50,886	0.52	7.70
Tippah	56,512	0.60	14.00	57,322	0.59	1.43
Tishomingo	74,615	0.79	18.22	73,705	0.75	—1.22
Tunica	18,168	0.19	6.28	18,056	0.18	—0.62
Union	73,084	0.77	12.22	70,933	0.73	—2.94
Walthall	22,367	0.24	10.90	20,942	0.21	—6.37
Warren	193,827	2.05	6.82	201,964	2.07	4.20
Washington	276,813	2.93	6.24	273,339	2.80	—1.26
Wayne	45,874	0.49	8.98	43,992	0.45	—4.10
Webster	24,485	0.26	10.49	24,159	0.25	—1.33
Wilkinson	23,010	0.24	11.47	23,114	0.24	0.45
Winston	53,424	0.57	10.22	50,192	0.51	—6.05
Yalobusha	42,808	0.45	15.86	40,626	0.42	—5.10
Yazoo	75,775	0.80	8.17	77,920	0.80	2.83
Other	515,565	5.45	20.36	129,912	1.33	—74.80
State Total	9,454,789		9.88	9,775,156		3.4